LAYBZON, N. D.

PA 64/49T103

USSR/Medicine - Plastic Surgery   May/Jun 49
Medicine - Cranium

"Plastic Closure of Cranial Defects With Cartilage From a Corpse," N. D. Laybzon, Dept of Clinical Neurosurg, Inst of Neurosurg imeni Acad N. N. Burdenko, Moscow, 6 pp

"Vop Neyrokhirurg" No 3

Cites previous literature on the use of corpse cartilage for the closure of cranial defects and describes the results of 24 surgical operations using preserved cartilage for closing minor defects performed by the author in 1947. The costal cartilage was taken from the corpse 4-12 hours   64/49T103

USSR/Medicine - Plastic Surgery   May/Jun 49
(Contd)

after death and preserved in a sterile Ringer solution at 3-4°. Gives data on the extent of calcification of the cartilage and the success of closure of the 24 operations. After 1½ years of postoperative observation no local or general complications were noted. Submitted 19 Feb 49.

64/49T103

BLASYAK, Ye.; LAYDLER, K.; PAVLIKOVSKIY, S.; SOBOLEVSKIY, Ya.; SOBOLEV-
SKIY, L.; POLYAKOV, N.N. [translator]; AVTSIN, I.Ye., red.;
BEN'KOVSKIY, S.V., red.; KOGAN, V.V., tekhn. red.

[Technology of fixed nitrogen; synthetic ammonia] Tekhnologiia
sviazannogo azota; sinteticheskii ammiak. By E.Blasiak i dr.
Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 263 p.

(Ammonia)   (Nitrogen compounds)   (MIRA 14:10)

LAYERT V. 1 .

LAERT, V.I.

Hydrogeological conditions in the Sultan-Uizdag Range. Zap. Uz. otd.
Vses. min. ob-va no.11:103-108 '57.
            (Sultan Uizdag Range—Water, Underground)   (MIRA 11:6)

LAYETIN, A.

Petroleum Industry

What is hidden behind average figures? V pom. profaktivu 14, No. 6, 1953.

9. <u>Monthly</u> <u>List</u> <u>of</u> <u>Russian</u> <u>Accessions</u>, Library of Congress, ____June____ 1953. Unclassified.

BLOKH,G.A., dotsent; KALIKA,S.B., inzhener; LAYEVSKAYA,G.I., inzhener;
BEZNICHENKO,Ye.Ya, inzhener; TSIPENYUK,M.V., inzhener.

Penetration of high polymer solutions into rubber and leather.
Leg.prom. 15 no.4:40-42 Ap '55.
   - (Polymers and polymerization) (Leather) (Rubber)   (MLRA 8:7)

S/081/61/000/019/081/085
B103/B147

AUTHORS: Slutskiy, S. B., Layevskaya, G. I., Reznichenko, Ye. Ya.

TITLE: Experience with nairit HT (NT)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 520, abstract
             19P295 (Kozhevenno-obuvn. prom-st', no. 4, 1960, 26-27)

TEXT: During the operation with chloroprene rubber polymerizing at low
temperatures (nairit NT) (I) and perfectly substituting gutta percha, it
was found that its technological properties were directly related with
the index of plasticity. The plasticity according to Karrer was
determined by changing the method of preparing the samples (mechanical
mastication was replaced by thermo mastication thus giving standard
samples with smooth surface). The index of plasticity of I is directly
related to its hardness and its capacity of being rolled, as well as to
its solubility, viscosity of solutions, and binding property. I with a
plasticity $\geq$ 0.15 can be easily rolled. I with a plasticity of 0.20-0.35
gives glues with excellent binding properties at normal viscosity and
concentration. When rolling I with a plasticity of 0.18-0.35, the time of

Card 1/2

Experience with najrit HT (NT)

S/081/61/000/019/081/085
B103/B147

mastication can be reduced from 50-60 to 20-25 min. There is no
noticeable relationship between tensile strength of I and binding property
of glue from it. [Abstracter's note: Complete translation.]

GLauNyy inzheNER Kiyevs Koy fabRiki No. 1
(for SLutskiy)
NachaL'Nik eksperimenTaL'Noy LaboRATorii
Rezing Kiyevskoy fabRiki No. 1
(for Layevskaya)

Card 2/2

LAYEVSKAYA, G.I. [Laievs'ka, H.I.]; VORONTSOVA, Ya.O.

Using the hot vulcanization method for the manufacture of foot-
wear from Russian leather. Leh.prom. no.3:47-49 Jl-S '63.
(MIRA 16:11)

1. Kiyevskaya obuvnaya fabrika No.1.

DERBAREMDIKER, M.L.; ZURABYAN, K.M.; LAYEVSKAYA, G.I.; LITVINOV, M.R.;
METELKIN, A.I.; SLUTSKIY, S.B.; SUCHKOV, V.G.

Production of Russian leather and of footwear manufactured with the
hot vulcanization method. Kozh.-obuv.prom.3 no.3:17-20 Mr '61.
(MIRA 14:6)

(Shoe manufacture)
(Leather)

ANOP, A.I.; LAYEVSKAYA, G.I. [Laievs'ka, H.I.]; REZNICHENKO, O.Ya.

Use of heat insulating materials for footwear manufactured with
the hot vulcanization method. Leh. prom. no.3:25-27   Jl-S '64.

(MIRA 17:10)

LAYEVSKAYA, G.S., inzhener.

New technique of finishing shoes made by the hot vulcanization
method. Leg. prom. 14 no.12:48-51 D '54.   (MLRA 8:2)
     (Shoe industry)(Vulcanization)

LAYEVSKAYA G.S.

SLUTSKIY, S.V., inzhener; LAYEVSKAYA, G.S., inzhener; TSIPENYUK, E.V., inzhener; REZNICHENKO, Ye.Ya., inzhener; BOGUSLAVSKIY, A.I., inzhener; SKURATOVSKIY, Z.Sh., inzhener.

Manufacture of footwear with microporous soles made by hot vulcanization under pressure. Leg. prom. 16 no.7:19-23 Jl '56.
(MLRA 9:10)

(Shoe industry) (Rubber, Synthetic)

BARTASHEVICH, O.A.; LAYEVSKAYA, L.U.

Testing a pilot plant model of a film evaporator in the production of adonis extract. Trudy Len. khim-farm. inst. no.14: 87-93 '62
(MIRA 17:2)

LAYEVSKIY, M., inzh,

Building large-panel apartment houses in the city of Cherepovets.
Zhil.stroi. no.4/5:8-11 '58.   (MIRA 12:6)
        (Cherepovets--Apartment Houses)
            (Concrete slabs)

LAYEVSKIY, M., glavnyy inzh.

> Demonstration building of an open-hearth plant. Stroitel' no.4:7,10
> Ap '59.   (MIRA 12:6)
>
> 1.Trest Cherepovetsmetallurgstroy.
>   (Cherepovets--Steelworks)

LAYEVSKIY, M. Ya.

LAYEVSKIY, M.Ya., inzh.; MOZHAYEV, S.M., inzh.

Using precast reinforced concrete in building coal towers for
batteries of coke ovens. Nov. tekh. i pered. op. v stroi. 20
no.3:4-7 M '58.

(MIRA 11:3)

(Coke ovens) (Precast concrete construction)

ALEKSEYEV, Ye.K., inzh.; IZGUR, R.M., inzh.; LYUKE, Ye.P., inzh.; NIKO-
LAYEVSKIY, Ye.Ya., inzh.; PIROGOV, A.N., inzh.; RODIONOVA, R.G.,
inzh.; TOYBIN, V.A., inzh.; FREYDLIN, G.M., inzh.; KHLYUPINA,
A.K., inzh.; CHERNOV, D.L., inzh.; EYDEL'MAN, L.B., inzh.; ZHMUR,
N.S., inzh., retsenzent; MOLYUKOV, G.A., inzh., red.; TIKHANOV,
A.Ya., tekhn.red.

[Production and installation of pipe systems; reference manual]
Izgotovlenie i montazh tekhnologicheskikh truboprovodov; spra-
vochnoe posobie. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1960. 574 p.   (MIRA 13:7)
                    (Pipe fitting)

LHY FHIHL, L. Ya.

LAYFMAN, L.Ya.

Conditions for existence of Kolmogorov's integral and the conception
of differential equivalence. Usp.mat.nauk 12 no.3:343-352 My-Je '57.
                                                    (MIRA 10:10)
                        (Integrals)

KIRILYUK,. V.P.; LAYFMAN, Ye.M.; SIVORONOV, A.A.; CHEDZHEMOV, G.Kh.; MAMCHUR,
G.P.; TSON', O.V.

New data on the absolute age determination of some geological
formations in the Amazar-Shilka interfluve (east Transbaikalia).
Geokhimiia no.12:1244-1255 D '64.   (MIRA 18:8)

1. Gosudarstvennyy ordena Lenina universitet imeni Iv. Franko, L'vov.

LAYGN/., G. Yu.,inzh.

Selection of the optimal cross section of holes and the distance between them. Izv. vys. ucheb. zav.;gor. zhur. 7 no.3: 84-88 '64   (MIRA 17:8)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G.V. Plekhanova.

LAYGNA, G.Yu., inzh.

Study of the ventilation of blind room workings by means of
hydraulic models. Izv. vys. ucheb. zav.; gor. zhur. 6 no.
12:26-30 '63.   (MIRA 17:5)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo
Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana
kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti.

LAYGNA, K.Yu., inzh.

New method of measuring solution concentrations by means of hydraulic modeling. Izv.vys.ucheb.zav.;gor.zhur. 7 no.6:67-69 '64.

(MIRA 17:12)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti.

LAYKEVICH, S.S.; BATUTIN, Yu.A.; CHALOV, N.V.

Use of automatic elevators by the Noril'sk expedition. Biul. nauch.-tekh.inform.VIMS no.1:51-55 '60. (MIRA 15:5)

1. Krasnoyarskoye geologicheskoye upravleniye.
   (Noril'sk region--Hoisting machinery) (Automatic control)

LAYKHTER, B.G.

BOKUNYAYEVA, A.I.; LAYKHTER, B.G.; LEV, R.A.; NEYMAN, V.N.

Degeneration due to aging in the region of the macula lutea. Vest.
oft. 70 no.2:36-39 Mr-Ap '57.
(MIRA 10:6)

1. Glaznoye otdeleniye TSentral'noy polikliniki Ministerstva
zdravookhraneniya SSSR (nauchnyy rukovoditel' prof. Z.A.Kaminskaya)
    (RETINA, physiol.
       degen. due to aging in region of macula lutea (Rus))
    (AGING, eff.
       same)

LAYKHTER, E.

Conference on tilling machinery. Trakt. i sel'khozmash no. 7:48
Jl '58.   (MIRA 11:7)
                    (Agricultural machinery)

LAYKHTER, E.G.; CHUMAK, A.V., inzh., red.; BEZRUCHKIN, I.P., kand.tekhn.
nauk, red.; ZANIN, A.V., kand.tekhn.nauk, red.; ZVOLINSKIY, N.P.,
inzh., red.; IVANOV, I.S., inzh., red.; KLETSKIN, M.I., inzh., red.;
PETROV, G.D., kand.tekhn.nauk, red.; PUSTYGIN, M.A., doktor tekhn.
nauk, red.; RABINOVICH, I.P., kand.tekhn.nauk, red.; RUDASHEVSKIY,
D.Sh., kand.tekhn.nauk, red.; SINEOKOV, G.N., doktor tekhn.nauk, red.;
SYSOYEV, N.I., kand.tekhn.nauk, red.; FEDOROV, V.A., inzh., red.;
CHAPKEVICH, A.A., kand.tekhn.nauk, red.; PONOMAREVA, A.A., tekhn.red.

[Bibliographic manual on tillage machinery and implements] Biblio-
graficheskii spravochnik po pochvoobrabatyvaiushchim mashinam i oru-
diiam. Moskva, Gosplanizdat. No.2. [Literature in the Russian
language from 1730-1955] Literatura na russkom iazyke za 1730-1955 gg.
Pod red. G.N.Sineokova. 1959. 263 p.   (MIRA 13:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-
khozyaystvennogo mashinostroyeniya.
          (Bibliography--Agricultural machinery)

L 3782-66   EWT(m)/EWF(c)/EWP(j)/T/EWP(t)/EWP(b)   IJP(c)   JD/WH/WB/RM

ACCESSION NR: AP5014137   UR/0365/65/001/003/0330/0334
                                           621.794.4
                                           620.197.3

AUTHOR: Klyuchnikov, N. G.; Kipriyanov, N. A.; Laykhter, L. B.; Fateyev, V. D.;
Shadrina, N. I.

TITLE: Investigation of the effect which various inhibitors have on the dissolution
of iron oxides

SOURCE: Zashchita metallov, v. 1, no. 3, 1965, 330-334

TOPIC TAGS: corrosion, corrosion rate, corrosion inhibitor, iron oxide

ABSTRACT: The authors study the dissolution of iron oxides in mineral acids as
well as in solutions of substances which form complex compounds with iron (citric
acid and ammonium citrate) for eliminating slag in boilers at thermal electric pow-
er stations. Samples of ferrous oxides and mixed iron oxides were prepared by sin-
tering powdered oxides in an argon atmosphere at 1200-1300°C. Ferric oxide speci-
mens were sintered in air at 1300°. The specimens were cylindrical with a surface
area of ∿7 cm². The inhibitors used were: BA-6 (a product of condensation of
benzylamine and urotropin); PB-5 (a product of condensation of urotropin and ani-

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ACCESSION NR: AP5014137

line); I-1-A, which is a byproduct of the manufacture of 2-methyl-5-ethyl pyridine;
"ChM" put out by Soviet Industry according to Technical Specifications MNP-521-54;
a mixture of potassium iodide and urotropin; Katapin-A (paradodecylbenzylpyridinium
chloride); and Katapin-K. Graphs and tables of the results are given. In most
cases, the inhibitors retard the action of hydrochloric acid on both ferrous and
ferric oxides. The rate of dissolution of FeO is increased only by I-1-A in $3N$
HCl and BA-6 in $7N$ HCl. In $1N$ and $2N$ mixtures of hydrochloric and sulfiric acids,
the rate of dissolution of FeO is reduced or somewhat increased by the presence of
inhibitors. In a $5N$ mixture of these acids with a high content of hydrochlorid
acid, the stimulating effect of the inhibitors reaches a maximum, and diminishes in
$7N$ acids. Dissolution of Fe_2O_3 is retarded by inhibitors in all concentrations of
sulfuric-hydrochloric acid mixtures studied. Certain concentrations of BA-6 inhi-
bitor in hydrochloric acid and in a hydrochloric-sulfuric mixture accelerate the
dissolution of FeO, and have the least effect on retardation of Fe_2O_3 dissolution
in comparison with the other inhibitors. At the same time, BA-6 is the most ef-
fective agent for retardation of steel dissolution in these media. FeO and Fe_3O_4
dissolve faster in a solution of ammonium monocitrate than in solutions of citric
acid. The most effective inhibitor for steel dissolution in citric acid and in am-
monium citrate solutions is an additive of 0.1% Katapin and 0.017% Captax. This

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ACCESSION NR: AP5014137

mixture is also quite effective in retarding the dissolution of FeO. Orig. art. has: 4 figures, 3 tables.

ASSOCIATION: Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V. I. Lenina (Moscow State Pedagogical Institute)

SUBMITTED: 25Dec64   ENCL: 00   SUB CODE: MM

NO REF SOV: 000   OTHER: 000

Card 3/3

LAYKHTMAN, B.D.

Determining the phonon spectrum from the cross section of in-
coherent neutron scattering on a crystal. Fiz. tver. tela 5 no.
10:3036-3037 O '63.   (MIRA 16:11)

1. Institut poluprovodnikov AN SSSR, Leningrad.

GUREVICH, V. L.; KAGAN, V. D.; LAYHTMAN, B. D.

"The growth of fluctuations and non-linear effects in the case of acoustical instability of semiconductors."

report submitted for Intl Conf on Physics of Semiconductors, Paris, 19-24 Jul 64.

ACCESSION NR: AP4019226   S/0056/64/046/002/0598/0611

AUTHORS: Gurevich, V. L.; Laykhtman, B. D.

TITLE: Nonlinear effects limiting the amplification of sound in piezoelectrics

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 598-611

TOPIC TAGS: piezoelectric, piezoelectric semiconductor, sound propagation in piezoelectric, nonlinearity, electronic nonlinearity, elastic nonlinearity, constant electric field, stationary wave, wave growth, wave attenuation, stationary wave stability

ABSTRACT: A semiconductor with carriers of only one polarity (assumed for concreteness to be electrons) is considered and the case when lattice absorption in sound is negligibly small is analyzed qualitatively. The method of iteration is used to investigate the stationary modes and the stability of the corresponding waves against

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ACCESSION NR: AP4019226

small changes in amplitude. It is found that the nonlinearity of electronic origin appears as a rule much earlier than the nonlinearity of the elastic properties of the crystal. The nonlinear effects lead to the existence of stationary waves which propagate in the crystal without amplification or damping. An expression is derived for the amplitude of the waves as a function of the stationary electric field strength. The damping or growth of waves that differ little from stationary waves is studied. It is shown that both oscillation modes are stable at high viscosity, so that a critical value of viscosity exists in the case of the second mode. Orig. art. has: 68 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR (Institute of Semi-conductors, AN SSSR)

SUBMITTED: 27Jun63   DATE ACQ: 27Mar64   ENCL: 00

SUB CODE: PH   NO REF SOV: 005   OTHER: 005

Card: 2/2

L 7002-65   EWT(1)/EPA(s)-2/EEC(b)-2   Pt-10   LJP(c)/AEDC(a)/AS(mp)-2/SSD/AFETR/
ISD(a)-5/AFWL/ESD(t)/RAEM(t)
ACCESSION NR: AP4044980   S/0181/64/006/009/2884/2886

AUTHORS: Gurevich, V. L.; Laykhtman, B. D.

TITLE: On the excitation of standing sound waves in piezoelectrics

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2884-2886

TOPIC TAGS: sound wave, standing wave, sound reflection, sound am-
plification, piezoelectric effect

ABSTRACT: The authors calculate the dependence of a stationary
standing sound wave in a piezoelectric on the applied constant elec-
tric field. The possible production and amplification of such sound
waves was first pointed out by D. L. White (J. Appl. Phys. v. 33,
2547, 1962). Under the assumption that the energy acquired by the
wave in the forward direction exceeds the sum of the losses in the
backward direction and the reflection losses, and that the reflection
from both ends of the semiconductor is almost specular, the authors

backward direction and the returned from both ends of the semiconductor is almost specular, the authors

Card 1/2

L 7002-65

ACCESSION NR: AP4044980

arrive ultimately at an expression

$$h(L) = \frac{36}{47} \chi^2 L \tau_M (V - V_s) \qquad (9)$$

where h is the square of the dimensionless amplitude, L the length of the crystal, $\chi = 4\pi\beta^2/\varepsilon c$, β -- piezoelectric modulus, ε -- dielectric constant, c -- modulus of elasticity, κ -- reciprocal Debye-Huckel radius, τ_M -- Maxwellian relaxation time, $V = \mu E$, μ -- mobility. The approximations under which the formula is derived are indicated.

approximations under which the formula is derived are indicated.
Orig. art. has: 10 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR (Leningrad) (Institute
of Semiconductors AN SSSR)

SUBMITTED: 19May64   ENCL: 00

SUB CODE: EM, GP   NR REF SOV: 004   OTHER: 003

Card 2/2

AUTHOR: Laykhtman, B. D.

TITLE: Deviations from Ohm's law in piezoelectric semiconductors

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3217-3221

TOPIC TAGS: piezoelectric effect, electric conductivity, carrier
mobility, relaxation time, cubic crystal, semiconductor

ABSTRACT: The kinetic equation for electrons in a strong electro-
magnetic field is solved in the relaxation-time approximation, in
view of its importance to the behavior of piezoelectric semiconduc-
tors in strong fields. Only the piezoelectric electron-phonon inter-
action is taken into account. For simplicity, the semiconductor is
assumed to have only one kind of carriers (electrons) and a cubic
crystal structure. The equation ultimately obtained for the elec-
tron mobility goes over at zero field to that obtained by W. R. Har-

Card   1/2

L 11430-65
ACCESSION NR: AP4048390   2

rison (Phys. Rev. v. 101, 907, 1956) or K. J. Sladek (Phys. Rev. v. 120, 1580, 1960). Other possible scattering mechanisms are considered briefly, and it is shown that the piezoelectric scattering mechanism is most effective at medium temperatures. "The author thanks V. L. Gurevich for suggesting the topic and a discussion of the results." Orig. art. has: 28 formulas.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AN SSSR)

SUBMITTED: 07Apr64   ENCL: 00

SUB CODE: SS, EM   NR REF SOV: 003   OTHER: 008

Card 2/2

L 12179-66   EWT(1)/EPF(n)-2/T/EWA(h)/ETC(m)   IJP(c)   WW/AT

ACC NR: AP5024719   SOURCE CODE: UR/0056/65/049/003/0960/0974

AUTHORS: Gurevich, V. L.; Laykhtman, B. D.   44,55

ORG: Institute of Semiconductors, Academy of Sciences SSSR (Institut poluprovodnikov Akademii nauk SSSR)   44,55

TITLE: Nonlinear theory of sound instability in piezoelectrics

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 3, 1965, 960-974

TOPIC TAGS: sound wave, piezoelectric crystal, semiconductor crystal, acoustic transducer

ABSTRACT: This is a continuation of an earlier study of the role of nonlinear effects in the propagation of traveling waves (ZhETF v. 46, 598, 1964). In the present article, a nonlinear theory is constructed for small-amplitude nonstationary waves traveling in piezoelectric semiconductors situated in a constant magnetic field. The question of how the stationary waves are formed is discussed. It is shown that a traveling sound wave goes over when amplified into a stationary wave provided the nonlinear correction to the damping coefficient of sound is greater than zero. A calculation of this correction is performed by the

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L 12179-66

ACC NR: AP5024719

method of amplitude iteration, and the conditions under which the correction is positive are determined. The law governing the transition of the small-amplitude traveling wave into the stationary wave is determined for waves whose amplification coefficient and phase velocity depend on the amplitude. It is shown that the method should be applied differently in cases of strong and weak decay (or buildup) of sound waves. Orig. art. has: 85 formulas.

SUB CODE: 20/   SUBM DATE: 20Apr65/   NR REF SOV: 009/   OTH REF: 010

Card   2/2

LAYKHTMAN, D. L.

"A Profile of the Wind and Exchange of the Ground Stratum," Izvestiya AN USSR, Geographical and Geophysical Series, No 1, 1944.

LAYKHTMAN, D. L.

"Radiation Cooling of the Lowest Air Layer", Izvestiya AN SSSR, seriya geograf. i. geofiz. (News of the Academy of Sciences USSR, Geographic and Geophysical Series) Vol. IX, 2, 1945.

SO: U-3039, 11 Mar 1953

LAYKHTMAN, D.L.

4B-252

Laikhtman, D. L. and Sapozhnikova, S. A., Arysskaia ekspeditsiia 1945 goda. [Arys expedition of 1945.] U.S.S.R. Glavnoe Upravlenie Gidrometeorologicheskoi Sluzhby, Trudy Nauchno-issledovatel'skikh Uchrezhdenii, Ser. 1. Meteorologiia, No. 39, Fizika Prizemnogo Sloia Atmosfery, p. 3-10, 1947. 5 figs., eqs. DLC—This expedition was organized by the Central Geophysical Observatory for investigation of wind variations near the ground and laws of heat exchange between surface and atmosphere. The twon Arys' is located 125 km NNW from Tashkent in a desert zone. In addition to the usual observations of wind velocity and temperature near the ground, the observations of the solar radiation and basic pilot balloon observations were carried out. Subject Headings: 1. Turbulent transfer of heat 2. Wind profiles 3. Arys' Expedition 1945 4. Arys', Uzbek S.S.R.—N.T.Z.

LAIKHTMAN, D. L.

2

551.511:532.5

1-193
Laikhtman, D. L. Uslovila vertikal'nol ustolchivosti primeniaiushchelsia s vysotol
skorosti vetra. [Conditions of vertical stability associated with the height of the wind GP
velocity.] (In: Soloveichik, R. E., ed., Fizike Atmosfery. Leningrad, Gidrometizdat, 1946,
p. 3-11, 29 eqs.) DLC—The author attempts to generalize the results of TAYLOR and GOLD-
STEIN on the three-dimensional flow of a compressible fluid and to determine the influence
of the vertical gradient of velocity upon the three-dimensional plan of a stratined compressible
fluid with the linear changes in its constituent velocities considered. Infinitely small wave
disturbances are superimposed upon this laminar flow and the stability of the latter can be
determined from the behavior of the former. From the hydrodynamic equation a function
γ characteristic for the analysis of vertical atmosphere stability is derived: $\tau = \theta, - Ri_{\ast}(\gamma^2 + \ell^2)/\ell$
where θ = potential temperature, Ri = Richardson criterion, $\gamma = \partial u/\partial z$, $\ell = \partial v/\partial z$. Subject
Headings: 1. Stability 2. Hydrodynamics.—I.L.D.

LAYKHTMAN, D L.

551.524.2:551.521

V 7.1-236
Laĭkhtman, D. L., Raspredelenie temperatury v prizemnom sloe atmosfery pri zadannom radiatsionnom balanse podstilaiushchei poverkhnosti. [Temperature distribution in the atmospheric layer near the ground for a given radiation balance of the underlying surface.] (In: Soloveĭchik, R. E. (ed.), Fizika atmosfery. Leningrad, Gidrometizdat, 1946. p. 12-18. 5 refs., 28 eqs.) DLC—The determination of distribution of temperature with height for a given radiation balance of the underlying surface is based upon a solution for equation of turbulent diffusion of heat since the coefficient of turbulent diffusion is a function of height. The mathematical derivation of the formula for calculating the temperature distribution at any height is given. Subject Headings: 1. Temperature distribution 2. Radiation balance 3. Turbulent diffusion of heat.—I.L.D.

LAYKHTMAN, D. L.

"Transformation of the Air Mass under the Influence of the Underlying Surface",
Meteorologiya i gidrologiya (Meteorology and Hydrology) No 1, 1947.

SO: U-3039, 11 Mar 1953

LAYKHTMAN, D.L.

New formula for the computation of thermal currents in the soil
based on experimental data. Trudy NIU Ser.1 no.39:23-26 '47.
                                                      (MLRA 7:2)
                                            (Soil temperature)

LAYKHTMAN, D.L.

AB-151   551,554

Laikhtman, D. L., O profile vetra v prizemnon sloe atmosfery pri statsionarnykh uslviiakh. /Wind profile in the air layer near the ground under stationary conditions./ U.S.S.R. Glavnoe Upravlenie Gidrometeorologicheskoi Sluzhby, Trudy Nauchno-issledovatel'skikh Uchrezhdenii, Ser. 1, Meteorologiia, No. 39, Fisika Prizemnogo Sloia Atmosfery, p. 58-76, 1947. 10 figs., DLC—With stable or unstable conditions, the vertical variation of the wind velocity differs essentially from the logarithmic law. The author derives a formula for the increase of wind velocity with height for any state of the atmosphere and verifies it experimentally. Some conclusions of Prandtl pertaining to this problem are generalized. Subject Heading: 1. Wind profiles.—W.T.Z.

LAYKHTMAN,   D. L.

"An Exact Method for Determining the Temperature (Thermal)Conductivity
of Soil," Trudy GGO, No 2, 1947.

LAYKHTMAN, D.L.

80-68   551.521.14:551.584

4. Laikhtman, D. L. and Chudnovskii, A. F. Fizika prizemnogo sloia atmosfery. [Physics of the
layer of air near the ground.] Leningrad, Gosudarstvennoe Izdat. Tekhniko-Teoreticheskoi Lit-ry,
1949, 254 p. 49 figs., 17 tables. 77 refs., 333 eqs. On half-title: Sovremennye problemy fiziki.
ed. by C. I. Vavilov, et al. 21. A g 1950. MAB.   DLC (QC861 L)
book on micrometeorological processes. Ch. 2 takes up radiative and thermal
and Sec. 3 of Ch. 2 (p. 27–32) the reflective properties of soil. The coefficient
is determined from the value which does not depend on direct
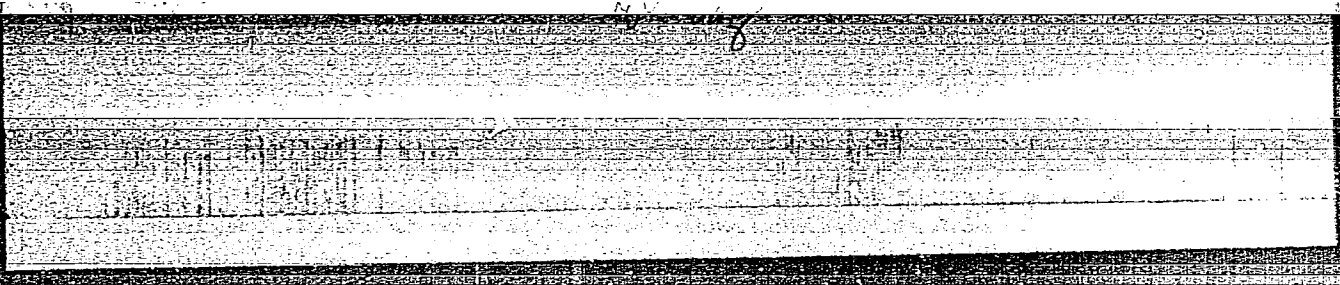
LAYKHTMAN, D. L.

Meteorology

Application of the theory of similarity in meterology. Trudy Glav. geofiz.obser. No. 20,
1949.

LAYKHTMAN, D. L.

Atmospheric Temperature

Computation of evaporation, and the flow of heat. Trudy Glav. geofiz. obser.
No. 20, 1949.

9. Monthly List of Russian Accessions, Library of Congress, _____June_____1953, Uncl.

LAYKHTMAN, D. L.

Turbulence

Turbulent motion in the lower layers of the atmosphere. Trudy Glav. geofiz. obser.
No. 21, 1949.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

LAYKHTMAN, D.L., doktor fiziko-matematicheskikh nauk.

Forecast of the daily course of humidity in the atmosphere near the ground.
Sbor.trud.Len.Gidrometeorol.inst. no.2:42-54 '50.
(MLRA 6:8)
(Humidity)

LAYKHTMAN, D.L.

AMS/A+B

JUL F 1951

2.7-72   551.511

Laikhtman, D. L. Nekotorye nestatsionarnye zadachi teorii teploprovodnosti v dina-
micheskoi meteorologii. [Some nonstationary problems of the theory of thermal conductivity
in dynamic meteorology.] Leningrad, Glavnaia Geofizicheskaia Observatoriia, Trudy, 19(81):
161-174, 1950. 2 tables, 93 equations. DLC. The integral equations are solved and pre-
sented in detail for determining from the radiation balance the diurnal or annual regime of
temperature, pressure and wind. Subject Headings: Dynamic meteorology, Thermal conduc-
tivity.— M.R.

LAYKHTMAN, D. L.

Meteorological Abst.
Vol. 4 No. 11
Nov. 1953
Air Temperature

551.524.4:551.584

4.11-162
Laikhtman, D. L., Predvychislenie sutochnykh kolebanii
temperatury v prizemnom sloe atmosfery. [Calculation
of daily temperature variations in the air layer near the
ground.] Leningrad. Glavnaia Geofizicheskaia Observatoriia.
Trudy, No. 22(84):5-14, 1950. fig., 3 tables, 9 refs.,
52 eqs. DLC—The author presents a method for calculating
actual temperatures in the air layer above the ground. The
problem is formulated in such a way that the temperature
can be determined directly, given initial and limiting con-
ditions, and the equations are set up in such a way that they
can be solved by the method of successive approximation.
It is then possible to determine the effect of advection
and temporal change on the coefficient of turbulence.
Subject Headings: 1. Temperature microvariations 2. Tempera-
ture calculations 3. Low level turbulence.—I.L.D.

LAYKHTMAN, D.L.

LAYKHTMAN, D.L.; KUCHEROV, N.V.

On a method for measuring radiation flux in the atmosphere. Trudy
GGO no.37:47-49 '52.   (MIRA 11:1)
                    (Solar radiation)

Laykhtman D.L.

LAYKHTMAN, D.L.

Energy of atmospheric convection. Trudy GGO no.37:71-73 '52.
(MIRA 11:1)

(Heat--Convection) (Atmospheric temperature)

LAYKHTMAN, D.L.

New method for determining the coefficient of turbulent viscosity
in atmospheric boundary layers. Trudy GGO no.37:78-82 '52.
(MIRA 11:1)

(Atmospheric turbulence)

LAYKHTMAN, D. L., BUDYKO, M. I., and TIMOFEYEV, M. P.

"Determination of the Coefficient of Turbulent Exchange in the Layer of Air Near the Ground," Meteorol. i Gidrologiya, No 3, 1953, pp 27-33

A brief description of methods for determining the coefficient of exchange in the practical operations of the Main Geophysical Observatory. The authors investigate the relation between the exchange coefficient and the characteristics that govern the profiles of temperature and wind velocity (Richardson's number). They evaluate the possible error of the methods presented at 10-20%. (RZhGeol. No 6, 1955) SO: Sum. No. 713, 9 Nov 55

State Geophysico Observatory im. Voyeykov, Leningrad

LAYKHTMAN, D.L.; OGNEVA, T.A.; TIMOFEYEV, M.P.; TSEYTIN, G. KH.; AYZENSHTAT, B.A.;
KIRILLOVA, T. V.

"Measurement of the Heat Balance of the Active Surface for the Case of
Irrigation"
Tr. Gl. Geofiz. Obervatorii, No 39, 37-60, 1953

The authors present data on the components of the heat and radiative bal-
ance of the active surface in a semidesert and in an irrigated field.
The data was obtained by an expedition of the Main Geophysical Observatory
in July 1952 in the sovkhoz "Pakhta-Aral," a collective farm in Central
Asia. It was found that heat exchange in soil practically does not change
under the influence of irrigation. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

LAYTKHTMAN, D. L., and TSEYTIN, G. KH.

"Variation in the Temperature of the Ground Layer of the Atmosphere During Irrigation"
Tr. Gl. Geofiz. Observatorii, No 39, 219-227, 1953

The effect of irrigation is studied as an effect resulting from variations in the heat content of moving air in consequence of variations in the conditions surrounding heat exchange in the underlying surface. A procedure is developed for computing the relationships of these variations. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

LAYKHTMAN, D. L.

U S S R

/5-135   551.524;551.571;551.515.8

Laikhtman, D. L., and IUdin, M. I., Transformatsila nizhnego sloia vozdukha pod vliianiem podstilaiushchel poverkhnosti. [Transformation of the lower air layer under the influence of the underlying surface.] *Akademiia Nauk SSSR, Doklady,* 93(2):249–252, Nov. 11, 1953. 4 refs, 24 eqs. DLC—Processes of air transformation under the influence of an active surface in which the changes in temperature and humidity are closely connected are always complex. However, up to recent times problems of changes of heat-and-moisture content in moving air masses were artificially segregated and the results were therefore limited because of the faulty assumption of boundary conditions. In this paper the author eliminates this defect and derives the solution of a practical case of a stable process of transformation. The method of reducing a system of equations to one equation is also applicable to the general cases of non-stable transformation. *Subject Headings:* 1. Air mass transformation 2. Heat and moisture effects.—A.M.P.

LAYKHTMAN, D.L.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Budyko, M.I. Laykhtman, D.L. Yudin, M.A. Kucherov, N.V. Berlyand, M.Ye. Krasikov, P.N. Timofeyev, M.P. Gayevskiy, V.L. Vorontsov, P.A.	"Physical Rules of the Microclimate of Agricultural Fields, Its Forecasting and Regulation" (series of articles)	Main Geophysics Observatory imeni A.I. Voyeykov

SO: W-30604, 7 July 1954

LAYKHTMAN, D. L.

"Problem of Evaluating the Vertical Component of the Velocity of Wind in
the Layer of Air near the Ground".
Sbornik tr. Leningr. gidromet. in-ta, No 3, pp 52-58, 1954.

The causes for vertical movements in the ground air layer are flow across
isobars (in the case of curvilinear isobars), presence of horizontal inhomogeneous
turbulence, and temperature variations in the ground air layer which cause vertical
movements with 24-hour period. For symmetric baric formation during steady-state move-
ment the author considers the equations of motion and the equation of continuity
in polar coordinates. Investigation of the obtained system of equations permits
discerning in the baric formation a region of small curvature of isobars (external
region) and a region of large curvature (central region) Introducing Simplifications
for the coefficient of turbulent viscosity and for dimensionless variables the author
integrates the equations. The obtained solution permits one to conclude that
increase of cyclonic curvature of isobars leads to weakening of the wind in a free
atmosphere, but increase of anticyclonic curvature leads to intensification of the
wind.

Evaluating the mean value of the vertical component for the entire layer under
consideration the author is led to the conclusion that in the case of horizontal
homogeneous turbulence in the layer of friction a certain vertical velocity occurs
whose magnitude is proportional to the pressure gradient with power 2/3; in the
case of the presence of horizontally inhomogeneous turbulence the

1/2

descending movements occur during displacement of air particles in the direction of
growth of turbulence and ascending movements occur during displacement in the direct-
ion of fall of turbelence. The latter fact can be clarified by flow across isobars.
The data obtained explainsthe increase of precipitation in regions of continuous
afforestation as dur to increase of turbulent transfer of water vapor to the
upper layers. (RZhGeol, No 8, 1955)

SO: Sum No 884, 9 Apr 1956

2/2

LAYKHTMAN, D.L.

OGNEVA, Tat'yana Aleksandrovna, kandidat geograficheskikh nauk; LAYKHT-
MAN, D.L., doktor fiziko-matematicheskikh nauk, redaktor; VLASOVA,
Yu.V., redaktor; SOLOVEYCHIK,A.A., tekhnicheskiy redaktor

[Some characteristics of heat balance of an acitve surface
(according to observations made at Koltush)] Nekotorye osoben-
nosti teplovogo balansa deiatel'noi poverkhnosti (po materialam
nabliudenii v Koltpushakh. Leningrad, Gidrometeorologicheskoe
izd-vo, 1955. 119 p.   (MLRA 9:3)
                            (Heat)

8.7-9

[Laikhtman, D. L. and Iudin, M. L. (eds.), Osnovy dinamicheskoi meteorologii   551.511 (02)
ciples of dynamic meteorology.] Leningrad, Gidromet. Izdat., 1955. 646 p. 144 figs.
[some fold., 42 tables, 65 refs., eqs. DLC (QC861.L36)—This textbook of dynamic meteor-
ology is based upon courses taught at the University of Leningrad and at the Leningrad
Hydrometeorological Institute. It is a comprehensive mathematical treatment
differential equations rather than vector analysis) of the entire field of dynamic meteorology.
The book is divided into 5 parts and 18 chapters: fundamental equations of the atmosphere,
the atmosphere, analysis and simplification of the equations of dynamics of the
thermodynamics of a dry atmosphere, and in saturated air, thermal convection in the atmosphere,
.... of the atmosphere, statics of the atmosphere, wind in the free atmosphere,
phere, ... variations of pressure and temperature, temporal variation of pressure ......
the ...... dynamic factors, surface boundary and waves in the atmosphere, distribution
of the meteorological elements in the surface layer of the atmosphere, energetics of the at-
mosphere and structure of meteorological fields, local circulations in the atmosphere, tem-
perature regime of the atmosphere and general circulation of the atmosphere. Subject Heading:
1. Dynamic meteorology textbooks. I. Gandin, Lev Semenovich II. Metvaev, L. T.—I.L.D.

Laykhtman, D. L.

USSR/Geophysics - Turbulence

FD-1791

Card 1/1   Pub 45-13/18

Author   : Glazova, Ye. F., and Laykhtman, D. L.

Title   : Elementary theory of the wet evaporator for the study of turbulence

Periodical : Izv. AN SSSR, Ser. geofiz. 278-281, May-Jun 1955

Abstract   : The development of a simple and dependable method for determining the
              coefficient of turbulence is still an important task of meteorology.
              The determination of this coefficient on the basis of measurements of
              the pulsations of meteorological elements requires very complex apparatus
              and considerable expenditure of time for operation. In the present work
              the authors propose a method for determining the coefficient of turbu-
              lence on the basis of measurements of evaporation from a wet evaporator,
              proposed in 1951 by Ye. F. Glazova ("Measurement of evaporability by an
              evaporator with constant moisture," Trudy GGO, No 43 (105), 1954).

Institution: Main Geophysical Observatory im. A. I. Voyeykov

Submitted : May 20, 1954

USSR/Geophysics - Irrigation   FD-2896

Card 1/1   Pub. 45 - 7/11

Author   : Laykhtman, D. L.

Title   : Physical principles governing the norms for irrigation

Periodical : Izv. AN SSSR, Ser. geofiz., Nov-Dec 1955, 541-546

Abstract   : The author poses the problem of determining the optimum norms of
               irrigation which must be kept in mind during the planning of water
               and land improvement enterprises. He states the problem mathemat-
               ically and solves it, and gives certain results of the computations
               with the derived formulas. He thanks Z. M. Utina for the computa-
               tional work. One reference: D. L. Laykhtman, "Transformation of
               an air mass under the influence of the underlying surface," Meteor-
               ologiya i gidrologiya, No 1, 1947.

Institution : Main Geophysical Observatory im. A. I. Voyeykov

Submitted   : June 18, 1954

LAYKH (MAN) ED-2?

8.3-50

Kuvshinova, K. V., Rogovaia sessia uchonogo soveta Glavnol Geofizichoskol Observatorii
im. A. I. Voelkova. [The final session of the scientific council of the Central Geophysical
Observatory.] Akademiia Nauk SSSR, Ser. Geogr., No. 3:84-86, 1955. DLC—Presents
minutes of a final session Jan. 18-22, 1955 at which achievements and activities of the preceding
year are reviewed and summarized. Besides the coworkers of the Observatory and of the
Hydro-meteorological Service it was attended by representatives of various universities and
institutes (Arctic, Geophysical, Geographical, Plant breeding). The most
read and discussed at the session were: Laikhtman

551.5(378.4)

read... Geophysical ... ... ended by repre... Observatory ...
...and...of the ...ion... ical Plant ...ing... The most important papers and
air layer ... application. Kucherov, N. V., Modern methods of investigation of air
1 km thick-air layer. Other reports concerned the temperature and wind regime of the lowest
of moisture exchange, etc. A new world map of the aridity index was presented. Subject
Headings: 1. Seminars 2. Central Geophysical Observatory, Leningrad, meetings.--A.M.P

LAYKHTMAN, D.L.

Determining the total evaporation and loss of heat from small reser-
voirs. Trudy GGO no.53:36-43 '55.   (MLRA 9:8)
            (Evaporation) (Reservoirs)

LAYKHTMAN, D.L.; TIMOFEYEV, M.P.

Methods of calculating evaporation from surfaces of restricted
water basins. Meteor.i gidrol. no.4:19-23 Ap '56.   (MLRA 9:8)
(Evaporation)

LAYKHTMAN, D.L.

Some properties of the atmospheric boundary layer. Trudy GGO no.56:
56-58 '56.

(Meteorology)

(MIRA 15:6)

SOV/36-56-60-3/10

AUTHOR: Laykhtman, D. L. and Klyuchnikova, L. S.

TITLE: Effect of Advection on the Intensity of Snow Thawing ("Vliyaniye advektsii na intensivnost' tayaniya snega)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 60, pp 32-39 (USSR)

ABSTRACT: Inflow of heat from radiation, vertical turbulent transfer, and the deeper layers of soil affect the rate of snow thawing. The present discussion is restricted to the effect of turbulent transfer. A mathematical interpretation with formulas and a solution of the problem are given. There are 2 figures, 2 tables, and 1 Soviet reference.

SOV/30-56-60-5/10

AUTHOR: Laykhtman, D. L. and Orlenko, G. P.

TITLE: Intensity of Turbulent Exchange Over Water (Ob intensivnosti
               turbulentnogo obmena nad vodnoy poverkhnost'yu)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 60, pp 51-52 (USSR)

ABSTRACT: An important indicator of turbulence over water surface is the ver-
               tical coefficient of turbulence which is a factor in all formulas for
               computing thermal streams, humidity, etc. This coefficient was cal-
               culated from parameters characterizing the distribution of diffusive
               substances. The parameters were secured in 54 experiments. The ar-
               ticle contains 1 diagram. There are no references.

Card 1/1

LAYKHTMAN, D. L.

156

AUTHORS: Gandin, L. S., Laykhtman, D. L., Sopots'ko, Ye.A., Shleneva, M. V.

TITLE: Problems in Dynamic Meteorology (Zadachnik po dinamicheskoy meteorologii)

PUB. DATA: Gidrometeorologicheskoye izdatel'stvo, Leningrad, 1957, 182 pp., 3000 copies.

ORIG. AGENCY: None given

EDITORS: Laykhtman, D. L., Professor; Vlasova, Yu. V.; Tech. Ed.: Braynina, M. I.

PURPOSE: The book serves as a textbook for meteorological departments of hydrometeorological institutes.

COVERAGE: The problems and their solution comprise the practical exercises for a course in dynamic meteorology. The problems are grouped in specific units as can be seen from the table of contents. Explanatory notes are attached to every chapter and some basic data necessary for solving the problems are inserted at the end. Author mentioned: Ludin, M. I. There are no references.

Card 1/7

LAIKHTMAN, D.L.

[Materials of an expedition to the Golodnaya Steppe] Materialy
ekspeditsii v Golodnuiu step'. Tashkent, Izd-vo Akad.nauk
Uzbekskoi SSR, 1957. 194 p.   (MIRA 14:1)
         (Golodnaya Steppe—Meteorology—Tables, etc.)

LAYKHTMAN, D. L.

AUTHOR: Laykhtman, D. L.   49-10-9/10

TITLE: Conference of the Chief Geophysics Observatory relating to meteorology of the near-ground layer of the atmosphere. (Konferentsiya Glavnoy Geofizicheskoy Observatorii po Meteorologii prizemnogo sloya vozdukha).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1957, No.10, pp.1273-1274 (USSR)

ABSTRACT: This conference was held between May 7 and 10, 1956 at the Chief Geophysics Observatory (Glavnoy Geofizicheskiy Observatorii). The conference was attended by numerous representatives of research institutes. The opening address was presented by the Director of the Chief Geophysics Observatory, M. I. Budyko and fourteen papers were read relating to differing problems. Most of the papers related to results of recent investigations of the near-ground layer of the atmosphere. The paper "Meteorological processes in the near-ground layer of the atmosphere in the Antarctic" by N. P. Rusin contained results of investigations of the near-ground layer carried out by the Soviet Antarctic Expedition in 1956; of great scientific interest are the data on the thermal balance of the active surface of the Antarctic and on the wind regime of the lower layer of the atmosphere. Due to

Card 1/6

49-10-9/10

Conference of the Chief Geophysics Observatory relating to
meteorology of the near-ground layer of the atmosphere.

features of the relief of the Antarctic in the region
where the expedition operated, they succeeded in obtaining
important data on the structure of winds above slopes.
The paper of D. L. Layktman was devoted to results of
investigation of the near-ground layer of the atmosphere
of the Central Arctic. The uniformity of the physical
properties of the underlying surface and absence of
daily variations of the short-wave radiation bring about
important features in the meteorological conditions of
the lower layers of the Arctic. The author gave quanti-
tative data on the characteristics composing the thermal
balance of the active surface and their variations during
the year, he gave an evaluation of the influence of the
ocean waters on the meteorological regime of the Arctic
and also results of theoretical conclusions of the
meteorological characteristics of the boundary layer of
the atmosphere of the Arctic. The paper of P.A.Vorontsov
contained much material on observations of the temperature
and the wind regimes of the boundary layer of the
atmosphere in various geographical regions of the U.S.S.R.

Card 2/6 The presented material is the result of micro-aerological

Conference of the Chief Geophysics Observatory relating to meteoro-
logy of the near-ground layer of the atmosphere.

49-10-9/10

measurements which were carried out by various expeditions
under the leadership of the author. Of considerable
interest are the results of analysis of experimental data
and the important characteristics of the boundary layer
of the atmosphere determined from these data, such as,
its height, coefficient of turbulence, etc. B.A.Ayzenshtat
and M. V. Zuyev described the results of investigation of
the micro-climate and of the thermal balance of the desert
and of the Pamir. In their measurements they used
apparatus of original design. Particularly interesting
are the data on the influence of the vegetation on the
components of the thermal balance. The authors reported
on the results of new investigations of local winds
revealed in the region where the expedition worked.
I. A. Gol'tsberg gave the results of investigations of
the meteorological conditions of the near-ground layer of
the atmosphere in regions of cultivation of virgin lands.
The authors studied the conditions of formation of
intensive inversions during the night above the "fine"
relief and established the presence of slope winds under

Card 3/6   such conditions and he gave relevant quantitative data.

49-10-9/10

Conference of the Chief Geophysics Observatory relating to meteoro-
logy of the near-ground layer of the atmosphere.

        A. P. Gal'tsov devoted his paper to the technique of
investigation of near-ground climate forming processes
based on observations at one point. The author described
a very interesting and original method of investigation
and also the results of much statistical work. The paper
of Corresponding Member of the Ac.Sc. A. M. Obukhov on the
relations governing the micro-structure of the temperature
and the wind in the near-ground layer of the atmosphere
excited great interest. He described the technique, the
results of observations and the analysis of the micro-
structure of the fields of temperature and wind. In the
structural functions given by the author, the respective
coefficients are determined on the basis of experimental
data. Certain data were obtained on the mechanism of
pulsations of meteorological elements. V.N. Kucherov and
M.S. Sterizat devoted their paper to the technique of
investigation of the boundary layer of the atmosphere. The
features of distribution of meteorological elements and the
intensive turbulence in the lower layers of the atmosphere
impose certain requirements on the apparatus for studying
Card 4/6   this layer. The authors gave a review of the existing

49-10-9/10

Conference of the Chief Geophysics Observatory relating to meteoro-
logy of the near-ground layer of the atmosphere.

technique and they analysed in detail new apparatus
developed in recent years. The paper of A.G. Samoylenko
was devoted to determining the components of the thermal
balance above water reservoirs. A considerable part of
the presented papers related to applied problems. The
paper of M. I. Budyko was devoted to calculation techniques,
to the geographical distribution of the temperature of the
active surface and its bioclimatic meaning. F.F. Davitaya
dealt with the very important practical problem of taking
into consideration micro-climatic features in distributing
the plantation of individual crops; the original
considerations of the author were illustrated by a number
of concrete examples. M. Ye. Berlyand devoted his paper
to the technique of local forecasting; he gave an analysis
of the problem and also the solution for a number of
concrete cases and some results relating to the methods
used. M. P. Timofeyev dealt with the methods of calculation
of the evaporation from small water reservoirs based on
modern meteorological conceptions relating to the lower
layers of the atmosphere; the author reviewed work in this
Card 5/6 field and also his own original investigations.

Conference of the Chief Geophysics Observatory relating to meteoro-
logy of the near-ground layer of the atmosphere.

> V. Ya. Nikandrov considered the physical relations govern-
> ing the formation and the dispersion of clouds; he reported
> a number of new and important results.   The conference
> showed that a new branch of meteorology, the meteorology
> of the lower layers of the atmosphere is being developed
> successfully in the Soviet Union. During a relatively
> short period interesting scientific and practical results
> were obtained in this field. The discussion has shown
> the great prospects involved in the practical utilisation
> of these results in various branches of the national
> economy.

N.B. (This is a complete translation).

AVAILABLE: Library of Congress

Card 6/6

36-57-69-9/16

AUTHOR: Laykhtman, D. L. and Rusin , N. P.

TITLE: Meteorological Conditions for a Dry Wind (O meteorologicheskom kriterii sukhoveya)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1957,
            Nr 69. pp 65-70 (USSR)

ABSTRACT: According to the author, a dry wind is defined as a "sukhovey" when it withers vegetation despite otherwise adequate humidity of the soil. The intensity of dryness depends on the interplay of four meteorological factors: air humidity, wind velocity, air temperature, and moisture balance (of vegetation). The author also claims that thus far it has not been possible to determine the role played by each individual factor in producing the dryness of a "sukhovey". The present article is an attempt to find a solution to this problem. The author analyzes each of the four factors and tries to establish an index of aridity based on the amount of moisture available to vegetation. The author assumes that the optimum relative humidity of soil in the arid zones of the Soviet Union is 70 percent. He also recalls the fact that with increasing air dryness the supply of moisture and transpiration increase accordingly, though only to a certain degree. When this critical point is exceeded and aridity continues

Card 1/2

Meteorological Conditions for a Dry (Cont.)

to mount the balance between moisture supply and respiration becomes distorted and withering sets in. A table cites the usual meteorological conditions which accompany a "sukhovey", such as loss of moisture by vegetation and changes in temperature, and shows their relationship to the velocity of wind and relative humidity, which are all recorded for particular hours and dates. Measurements were taken at an altitude of 2 meters; the velocity of wind was determined at the altitude of 8 meters. Table 2 traces the amount of evaporation; Table 3, the degree of excessive dryness. These observations were carried out in the Sal'sk steppe in Rostovskaya oblast'. It was found that when loss in transpiration was above 3 mm. in 24 hours, plants began to wither. The author also describes occurrences of dangerous "sukhovey". There are no references.

AVAILABLE: Library of Congress

Card 2/2

36-57-69-11/16

AUTHOR: Laykhtman, D. L. and Klyuchnikova, L. A.

TITLE: The Role of "Polynya" in the Heat Balance of the Arctic (Rol' razvodiy v teplovom balanse Arktiki)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1957, Nr 69, pp 77-79 (USSR)

ABSTRACT: Although polynyas form only 5 percent of the total Arctic ice cover, they play an important role in its heat balance. The authors analyze the problem by comparing the components of heat balance for ice-covered and open water su...ces. The analysis is mathematical and the conclusion is that 50 percent of the heat emitted in the Arctic comes from the open polynya areas. There are 1 Soviet reference, 2 tables, and 1 figure.

AVAILABLE: Library of Congress

Card 1/1

LAYKHTMAN, D. L.

"The theory of the wind drift of ice"

report presented at a Scientific Conference on Dynamic and Thermal Interaction of
the Atmosphere and Hydrosphere, 26-29 Mar. 1958, Leningrad (Vest Ak nauk SSSR, 7,
'58, p. 128-29)

S/124/60/000/007/005/008
A005/A001

AUTHOR: Laykhtman, D. L.

TITLE: The Mechanisms of the Physical Processes of the Atmospheric
             Boundary Layer in the Arctic Regions

PERIODICAL: V sb.: Sovrem. probl. meteorol. prisemn. sloya vozdukha. Leningrad,
             Gidrometeoizdat, 1958, pp. 26-42

TEXT: The peculiarities of processes in the atmospheric boundary layer in
the arctic regions were studied from the results of observations at СП-5 (SP-5)
in winter 1955 and СП-6 (SP-6) in summer 1956. The specificity of these
processes is determined by the minuteness of the diurnal fluctuations of the
solar radiation, the homogeneity of the ground surface, and the constancy of
the temperature of the latter (equal to the freezing point of salt water). The
average values of the components of the heat balance above the snow and the lead
in summer and in winter are presented. These values are 5 - 10 times smaller
than in the temperate latitudes, which indicates that the system is close to the

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The Mechanisms of the Physical Processes of the Atmospheric Boundary Layer in
the Arctic Regions

thermal equilibrium. It is stated that the leads play an essential part in the
state of the boundary layer, because, as an example, the open water emits in
winter 20 times more heat than the ice surface. The analysis of the radiation
balance shows that the catabatic and anabatic longwave radiation streams in
summer are similar to the radiation of the absolute black body; the existence of
cloudiness essentially affects the radiation balance. Characteristical profiles
of the temperature in the air, in the layers of snow and ice and in water in
summer and winter are presented. A strong discontinuity is typical in winter at
the interface of snow and ice, which is explanable by the difference in heat
conductivities (the ratio of the heat-conductivity coefficients amounts to 0.14).
The anabatic heat current from ice is essential: in winter it amounts on the
average to 27 cal/cm^2 during 24 hours. It is possible to judge on this heat
current and also on the ice accretion rate from the snow surface temperature.
The wind profiles are usually well approximated by the logarithmic law. An
approximate theory of the steady conditions in the boundary layer is expounded,
on the basis of which the yearly course of the temperature and the components

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A005/A001

The Mechanisms of the Physical Processes of the Atmospheric Boundary Layer in
the Arctic Regions

of the heat balance, the turbulence coefficient averaged over the altitude, and
the thickness of the boundary layer were calculated. The results of calculation
and the data from measurements agree satisfactorily.

A. S. Monin

Translator's note: This is the full translation of the original Russian
                    abstract.

Card 3/3

AUTHOR: None Given   SOV/50-58-6-22/24

TITLE: Transactions of the Scientific Research Institutes of the
            "Hydrometeorologic" Service in 1957 (Trudy nauchno-issledo-
            vatel'skikh uchrezhdeniy Gidrometeosluzhby za 1957 g.)
            Continuation (Prodolzheniye)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 6, pp. 61 - 63 (USSR)

ABSTRACT: Transactions of the Geophysical Main Observatory imeni A. I.
            Voyeykov (Trudy Glavnoy geofizicheskoy observatorii im. A. I.
            Voyeykova) Periodical Nr 67. Research problems of clouds of
            mighty convection and of the zones of thunderstorm activity.
            Editor: V. V. Bazilevich, 153 pages, 11 articles.
            Periodical Nr 68. Problems of actinometry and atmospheric
            optics. Editor: K. S. Shifrin and V. L. Gayevskiy, 208 pages,
            18 articles.
            Periodical Nr 69. Problems of the physics of the ground-near
            layer of the atmosphere. Editor: D. L. Laykhtman, 107 pages,
            16 articles.
            Periodical Nr 70. Problems of general climatology. Editor:
Card 1/3   O. A. Drozdov, 135 pages, 6 articles,

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Transactions of the Scientific Research Institutes of the "Hydrometeorologic"
Service in 1957. Continuation

Periodical Nr 71. Problems of the numerical forecast and of
climate theory. Editor: M. I. Yudin, 236 pages, 16 articles.
Periodical Nr 72. Problems of atmospheric physics. Editor:
A. P. Chuvayev, 151 pages, 13 articles.
Periodical Nr 73. Atmospheric physics. Editor: V. V. Bazile-
vich, 132 pages, 11 articles.
(Periodical Nr 74 is not given).
Periodical Nr 75. Glazed frost and hoar-frost. Editor: O. A.
Drozdov, 91 pages, 4 articles.

Transactions of the State Hydrological Institute (Trudy Gosudarst-
vennogo gidrologicheskogo instituta)
Periodical Nr 59. Experimental investigation of the elements
of the water balance in Valday. Editors: A. R. Konstantinov
and V. V. Kupriyanov, 224 pages, 6 articles.
Periodical Nr 60. Problems of the hydrology of swamps. Editor:
K. Ye. Ivanov, 108 pages, 6 articles.
Periodical Nr 61. Problems of the flow formation and the meth-
ods for its calculation. Editor: D. L. Sokolovskiy, 306 pages,
11 articles.

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SOV/50-58-6-22/24

Transactions of the Scientific Research Institutes of the "Hydrometeorologic"
Service in 1957. Continuation

Periodical Nr 62. Problems of hydrometry. Editor: A. K.
Proskuryakov, 108 pages, 6 articles.
(Periodical Nr 63 is not mentioned).
Periodical Nr 64. Problems of the construction of hydrologi-
cal apparatus. Editor: K. D. Zav'yalov, 58 pages, 6 articles.
(Periodical Nr 65 is not mentioned).
Periodical Nr 66. Research problems of lakes and reservoirs.
Editor: L. P. Domanitskiy, 140 pages, 5 articles.

1. Scientific reports--USSR   2. Meteorology   3. Hydrology

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LAYKHTMAN, D.L.

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PHASE I BOOK EXPLOITATION   SOV/2440

Vsesoyuznyy gidrologicheskiy s"yezd, 3rd, Leningrad, 1957.

Trudy...t. III: Sektsiya gidrofiziki (Transactions of the 3rd All-
    Union Hydrological Convention. v. 3: Hydrophysics Section)
    Leningrad, Gidrometeoizdat, 1959. 470 p. Errata slip inserted.
    2,000 copies printed.

Sponsoring agency: Glavnoye upravleniye gidrometeorologicheskoy
    sluzhby pri Sovete Ministrov SSSR.

Resp. Ed.: V.A. Uryvayev; Ed.: V.S. Protopopov; Tech. Ed.: M.I.
    Braynina.

PURPOSE: This work is intended for meteorologists, hydrologists, and
    hydrophysicists, particularly those engaged in the study of snow
    and ice and evaporation processes.

COVERAGE: This book contains papers on hydrophysics which were pre-
    sented and discussed at the Third All-Union Hydrological Conference
    in Leningrad, October 1957. The Conference published 10 volumes

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Transactions of the 3rd All-Union (Cont.)   SOV/2440

on various aspects of hydrology of which this is number 3. The
editorial board in charge of the series include: V.A. Uryvayev
(Chairman), O.A. Alekin, Ye.V. Bliznyak (deceased), O.N. Borsuk,
M.A. Velikanov, L.K. Davydov, A.P. Domanitskiy, G.P. Kalinin, S.N.
Kritskiy, B.I. Kudelin, L.F. Manoim, M.F. Menkel', B.P. Orlov,
I. V. Popov, A.K. Proskuryakov, D.L. Sokolovskiy, O.A. Spengler,
A.I. Chebotarev, and S.K. Cherkavskiy. This volume is divided in-
to 2 sections: the first contains reports from the subsection
for the study of evaporation processes, and the second contains
reports from the snow and ice subsection. References accompany
each article.

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LAYKHTMAN, D.L.

PHASE I BOOK EXPLOITATION   SOV/4641

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy fiziki prizemnogo sloya vozdukha (Problems in the Physics of the
    Near-Surface Air Layer) Leningrad, Gidrometeoizdat, 1960. 161 p.
    (Series: Its: Trudy, vyp. 94) Errata slip inserted. 850 copies printed.

Sponsoring Agencies: Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova;
    Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov
    SSSR.

Ed. (Title page): D.L. Laykhtman, Doctor of Physics and Mathematics; Ed.
    (Inside book): Yu.V. Vlasova; Tech. Ed.: N.V. Volkov.

PURPOSE: This publication is intended for meteorologists specializing in the
    lower layers of the atmosphere. It may also be of interest to agronomists,
    construction engineers, and other specialists whose activities are influenced
    by atmospheric conditions.

COVERAGE: This issue of the Transactions of the Main Geophysical Observatory
    contains 18 articles dealing mainly with problems of the physics of the near-
    surface air layer. Correlations between the surface wind and geostrophic
    wind are examined and the results of both theoretical calculations and

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